Amendment to the Claims

Please cancel claims 1-25 and 34-43. Following is a listing of the claims pending in the application, as amended:

1-25. (Cancelled)

26.   (Original) A method in a computing system for automatically configuring parameters controlling operation of a deposition chamber to deposit material on each of a sequence of wafers to improve conformity with a specified deposition pattern, comprising:

for each of the sequence of wafers, measuring thicknesses of the wafer before material is deposited on the wafer;

for each of the sequence of wafers, measuring thicknesses of the wafer after material is deposited on the wafer;

for each of the sequence of wafers, configuring the parameters for depositing material on the wafer based on the specified deposition pattern, the measured thickness of the current wafer before material is deposited on the current wafer, the measured thickness of the previous wafer in the sequence before material is deposited on the previous wafer, the parameters used for depositing material on the previous wafer, and the measured thicknesses of the previous wafer after material is deposited on the previous wafer.

27.   (Original) The method of claim 26 wherein the specified deposition pattern is a flat deposition pattern.

28.   (Original) The method of claim 26 wherein the specified deposition pattern is a concave deposition pattern.

29.   (Original) The method of claim 26 wherein the specified deposition pattern is a convex deposition pattern.

30.   (Original) The method of claim 26 wherein the specified deposition pattern is an arbitrary radial profile.

31.   (Original) The method of claim 26 wherein the specified deposition pattern is an arbitrary profile.

32.   (Original) The method of claim 26, further comprising, for a second deposition chamber:

retrieving a set of offset values characterizing differences between the deposition chamber and the second deposition chamber;

modifying the parameters most recently configured for the deposition chamber in accordance with the retrieved set of offset values to obtain a parameters for the second deposition chamber; and

configuring the second deposition chamber with the obtained parameters for the second deposition chamber.

33.   (Original) An apparatus for automatically configuring parameters controlling operation of a deposition chamber to deposit material on each of a sequence of wafers to improve conformity with a specified deposition pattern, comprising:

a pre-deposition measuring subsystem that measures thicknesses of each of the sequence of wafers before material is deposited on the wafer;

a pre-deposition measuring subsystem that measures thicknesses of each of the sequence of wafers after material is deposited on the wafer;

a parameter configuration subsystem that configures the parameters for depositing material on each of the sequence of wafers based on the specified deposition pattern, the measured thickness of the current wafer before material is deposited on the current wafer, the measured thickness of the previous wafer in the sequence before material is deposited on the previous wafer, the parameters used for

depositing material on the previous wafer, and the measured thicknesses of the previous wafer after material Is deposited on the previous wafer.

34-43.   (Cancelled)

44.   (Original) One or more computer memories collectively containing a data structure for controlling a material deposition process, comprising a set of parameter values used in the material deposition process, the parameters having been generated by adjusting an earlier-used set of parameters to resolve differences between measurements of a workpiece deposited using the earlier-used set of parameters and a target deposition profile specified for the deposition process,

such that the contents of the data structure may be used to deposit an additional workpiece in greater conformance with the specified deposition profile.

45.   (Original) The computer memories of claim 44 wherein the deposition process utilizes a plurality of electrodes, and wherein each parameter value of the set is an amount of current to be delivered through one of the plurality of electrodes.

46.   (Original) One or more computer memories collectively containing a deposition chamber offset data structure, comprising a set of values indicating how to adjust a first parameter set used to obtain acceptable deposition results in a first deposition chamber to produce a second parameter set usable to obtain acceptable deposition results in a second deposition chamber.

47-57. (Cancelled)